



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-1103; Directorate Identifier 2012-NM-131-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes. This proposed AD was prompted by reports of cracking of the forward bulkhead web, web stiffeners, attachment angles, and thermal anti-ice (TAI) spray ring assemblies of the engine air intake cowl. This proposed AD would require replacing the forward bulkhead assembly, TAI spray ring assembly, and attachment fittings of the air intake cowl. We are proposing this AD to prevent the failure of air intake cowl components due to cracking, which could result in the air intake cowl separating from the engine and striking critical airplane control surfaces that could result in a loss of airplane control; severe engine damage and loss of thrust; or large parts striking a person or property on the ground.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For Rolls-Royce service information identified in this proposed AD, contact Rolls-Royce plc, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; telephone 011 44 1332 242424; fax 011 44 1332 249936; email [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp); Internet <https://www.aeromanager.com>. For Bombardier service information identified in this proposed AD, contact Short Brothers PLC, Airworthiness, P.O. Box 241, Airport Road, Belfast, BT3 9DZ Northern Ireland; telephone +44(0)2890-462469; fax +44(0)2890-468444; Internet <http://www.bombardier.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Kevin Nguyen, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6501; fax: (425) 917-6590; email: [kevin.nguyen@faa.gov](mailto:kevin.nguyen@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-1103; Directorate Identifier 2012-NM-131-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

**Discussion**

We have received reports of extensive cracking of the forward bulkhead web, web stiffeners, attachment angles, and TAI spray ring assemblies of the air intake cowl. We received another report of extensive cracking in the forward bulkhead inner and outer cap angles, stiffeners, and the bulkhead web. In addition, the TAI piccolo tube and supports were found cracked after the intake cowl was disassembled. Further investigation determined that the issue was related to metal fatigue during the service lifetime of the components; therefore, there is a need to remove and replace the affected components within a prescribed timescale. Cracked air intake cowl parts and

assemblies, if not corrected, could result in the air intake cowl separating from the engine and striking critical airplane control surfaces that could result in a loss of airplane control; severe engine damage, and loss of thrust; or large parts striking a person or property on the ground.

#### **Relevant Service Information**

We reviewed Rolls-Royce Service Bulletin RB.211-71-AG698, including Appendices 1, 2, 3, and 4, dated October 14, 2011 (for engines having Dyna-Rohr or Bombardier standard air intake cowls); and Bombardier Alert Service Bulletin RB211-E4-A1003, Revision 1, dated August 15, 2012 (for engines with air intake cowls modified by Bombardier Aerospace Supplemental Type Certificate (STC) ST02102NY,

[http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf), commonly known as a 535EX cowls).

The service information describes procedures for removing and replacing, with new parts, the forward bulkhead assembly, TAI spray ring assembly, and attachment fittings of the air intake cowl.

#### **FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

#### **Proposed AD Requirements**

This proposed AD would require accomplishing the actions specified in the service information described previously.

## Interim Action

We consider this proposed AD interim action due to on-going investigation into the nature, cause, and extent of the cracking. If final action is later identified, based on the results of the investigation, we might consider further rulemaking then.

## Costs of Compliance

We estimate that this proposed AD affects 332 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replace left-side air intake cowl components	Up to 252 work-hours X \$85 per hour = \$21,420 per replacement	Up to \$158,760	Up to \$180,180 per replacement	Up to \$59,819,760
Replace right-side air intake cowl components	Up to 252 work-hours X \$85 per hour = \$21,420 per replacement	Up to \$158,760	Up to \$180,180 per replacement	Up to \$59,819,760

## Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that

authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**The Boeing Company:** Docket No. FAA-2012-1103; Directorate Identifier 2012-NM-131-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes, certificated in any category, equipped with Rolls-Royce RB211-535E4, -535E4-B, -535E4-C, and -535E4X engines; or with Rolls-Royce RB211-535E4, -535E4-B, and -535E4-C engines that have air intake cowls that were modified by Bombardier Aerospace Supplemental Type Certificate (STC) ST02102NY, [http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf), commonly known as 535E4X cowls.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 71, Powerplant.

**(e) Unsafe Condition**

This AD was prompted by reports of cracking of the forward bulkhead web, web stiffeners, attachment angles, and thermal anti-ice (TAI) spray ring assemblies of the engine air intake cowl. We are issuing this AD to prevent the failure of air intake cowl components due to cracking, which could result in the air intake cowl separating from the engine and striking critical airplane control surfaces that could result in a loss of airplane control; severe engine damage, and loss of thrust; or large parts striking a person or property on the ground.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Replacement of Air Intake Cowl Complete Forward Bulkhead Assemblies Previously Disassembled**

For airplanes on which the air intake cowls were replaced before the effective date of this AD using a kit or parts identified in paragraph (g)(1), (g)(2), or (g)(3) of this AD: Within 144 months since replacement of the air intake cowl, or within 12 months after the effective date of this AD, whichever is later, replace the forward bulkhead assembly, TAI spray ring assembly, and associated attachment fittings of the air intake cowl with new parts, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin RB211-E4-A1003, Revision 1, dated August 15, 2012 (for engines with air intake cowls modified by Bombardier Aerospace STC ST02102NY, [http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf), commonly known as a 535EX cowls); or Rolls-Royce Service Bulletin RB.211-71-AG698, dated October 14, 2011 (for engines having Dyna-Rohr or Bombardier standard air intake cowls). Repeat the replacement thereafter at intervals not to exceed 144 months.

(1) RB211-E4A1003 KIT, or all the parts listed in Appendix 3 of Bombardier Alert Service Bulletin RB211-E4-A1003, Revision 1, dated August 15, 2012 (for engines with air intake cowls modified by STC ST02102NY, commonly known as a 535EX cowls).

(2) RB-211-71-AG698-E4KIT, or all the parts listed in Appendix 3 of Rolls-Royce Service Bulletin RB.211-71-AG698, dated October 14, 2011 (for engines with Dyna-Rohr standard air intake cowls).

(3) RB-211-71-AG698-E4BKIT, or all the parts listed in Appendix 4 of Rolls-Royce Service Bulletin RB.211-71-AG698, dated October 14, 2011 (for engines with Bombardier standard air intake cowls).

**(h) Replacement of In-Service Air Intake Cowl Complete Forward Bulkhead Assemblies**

For airplanes other than those identified in paragraph (g) of this AD: At the applicable time specified in paragraphs (h)(1) through (h)(12) of this AD, replace the forward bulkhead assembly, TAI spray ring assembly, and associated attachment fittings of the air intake cowl with new parts, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin RB211-E4-A1003, Revision 1, dated August 15, 2012 (for engines with air intake cowls modified by Bombardier Aerospace STC ST02102NY [http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf), commonly known as a 535EX cowls); or Rolls-Royce Service Bulletin RB.211-71-AG698, dated October 14, 2011 (for engines with Dyna-Rohr or Bombardier standard air intake cowls.) Repeat the replacement thereafter at intervals not to exceed 144 months.

(1) For airplanes with air intake cowls having serial numbers 4001 through 4121 inclusive: Replace within 12 months after the effective date of this AD.

(2) For airplanes with air intake cowls having serial numbers 4122 through 4241 inclusive: Replace within 24 months after the effective date of this AD.

(3) For airplanes with air intake cowls having serial numbers 4242 through 4361 inclusive: Replace within 36 months after the effective date of this AD.

(4) For airplanes with air intake cowls having serial numbers 4362 through 4481 inclusive: Replace within 48 months after the effective date of this AD.

(5) For airplanes with air intake cowls having serial numbers 4482 through 4484 inclusive: Replace within 60 months after the effective date of this AD.

(6) For airplanes with air intake cowls having serial numbers 9001 through 9117 inclusive: Replace within 60 months after the effective date of this AD.

(7) For airplanes with air intake cowls having serial numbers 9118 through 9237 inclusive: Replace within 72 months after the effective date of this AD.

(8) For airplanes with air intake cowls having serial numbers 9238 through 9357 inclusive: Replace within 84 months after the effective date of this AD.

(9) For airplanes with air intake cowls having serial numbers 9358 through 9477 inclusive: Replace within 96 months after the effective date of this AD.

(10) For airplanes with air intake cowls having serial numbers 9478 through 9597 inclusive: Replace within 108 months after the effective date of this AD.

(11) For airplanes with air intake cowls having serial numbers 9598 through 9717 inclusive: Replace within 120 months after the effective date of this AD.

(12) For airplanes with air intake cowls having serial numbers 9718 through 9780 inclusive: Replace within 132 months after the effective date of this AD.

**(i) Credit for Previous Actions**

For engines with air intake cowls modified by Bombardier Aerospace STC ST02102NY

[http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf), commonly known as a 535EX cowls): This paragraph provides credit for actions required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Alert Service Bulletin RB211-E4-A1003, dated June 27, 2012 (which is not incorporated by reference in this AD).

**(j) No Reporting Requirement**

Although Bombardier Alert Service Bulletin RB211-E4-A1003, Revision 1, dated August 15, 2012; and Rolls-Royce Service Bulletin RB.211-71-AG698, excluding Appendix 1 and including Appendices 2, 3, and 4, dated October 14, 2011; specify to submit certain reporting information to the manufacturer, this AD does not include that requirement.

**(k) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed to: [9-ANM-Seattle-ACO-AMOC-Requests@faa.gov](mailto:9-ANM-Seattle-ACO-AMOC-Requests@faa.gov).

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(I) Related Information**

(1) For more information about this AD, contact Kevin Nguyen, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6501; fax: (425) 917-6590; email: [kevin.nguyen@faa.gov](mailto:kevin.nguyen@faa.gov).

(2) For Rolls-Royce service information identified in this AD, contact Rolls-Royce plc, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; telephone 011 44 1332 242424; fax 011 44 1332 249936; email [http://www.rolls-royce.com/contact/civil\\_team.jsp](http://www.rolls-royce.com/contact/civil_team.jsp); Internet <https://www.aeromanager.com>. For Bombardier Service information identified in this AD, contact Short Brothers PLC, Airworthiness, P.O. Box 241, Airport Road, Belfast, BT3 9DZ Northern Ireland; telephone +44(0)2890-462469; fax +44(0)2890-468444; Internet <http://www.bombardier.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on October 12, 2012.

Kalene C. Yanamura,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2012-25780 Filed 10/18/2012 at 8:45 am; Publication Date: 10/19/2012]